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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/549,810

09/19/2005

Sadao Ioki

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02/23/2010

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EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

NOTIFICATION DATE

DELIVERY MODE

02/23/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/549,810 | Applicant(s) IOKI ET AL. | |
| | Examiner TIMOTHY RUDE | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 5-12 is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

Claims 1-3 and 5-13 are amended. Claim 4 is canceled by Applicant.

Election/Restrictions

Applicant's submittal filed 13 March 2009 states that the amended claims do not read on a species independent from the constructively elected species [page 2].

Since applicant traversed on the ground that the species are not patentably distinct, and clearly admitted on the record that this is the case, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows: Claim 11 is amended to read:

The image display system according to one of claims 1, 2, [4,] and 5 wherein...

This corrects a typo in that claim 4 has been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim **13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (WO 01/59508 A1, using US 6,864,862 B2 as the US equivalent document), in view of Weindorf et al. (US 2002/0140880 A1) and Holman et al. (US 6,871,982 B2).

Regarding Claim 13:

Sato et al. discloses a light source unit (liquid crystal display unit 10a.

See at least to Figs. 9A, 9B, 10, 11A, 11B) comprising

- a light source member (polarizing filter 22a of Sato et al.) for observation from the front at a center portion and
- light source members (polarizing filter 21a and halfwave plates 26 of Sato et al.) for enlarging the viewing angle at both end portions for emitting

light linearly and irradiating on a liquid crystal display panel from behind via optical means (Fresnel lens 11. See Figs 9A-B) which refracts and irradiates light onto the liquid crystal display panel.

Sato et al. fails to disclose the light source unit comprises center prisms and peripheral prisms.

Holman et al. discloses an illumination system (Applicant's linear light-emitting source) wherein light-recycling reflectors for collecting and reusing light emitted by a planar LED light source (See at least column 4, lines 34-35; and Figs. 15A-28E) for achieving the highest possible concentrations of output lumens per square millimeter of output aperture (See column 4, lines 34-35; and column 11, lines 36-38 of Holman et al., respectively). Therefore, it would have been at least obvious to one of ordinary skill in the art to employ the light-recycling reflectors into the light source unit for achieving advantages such as the highest possible concentrations of output lumens per square millimeter of output aperture. (See column 11, lines 36-38 of Holman et al.). In other words, configured in such a manner that

- the center prisms for narrowing an irradiating range of the linear light-emitting source to increase the brightness are disposed at the center portion of the linear light-emitting source

can be obtained. Doing so, the highest possible concentrations of output lumens per square millimeter of output aperture can be obtained (See column 11, lines 36-38 of Holman et al., respectively).

Sato et al. as modified by Holman et al. fails to disclose peripheral prisms having a brightness different from the center prisms.

Weindorf et al. discloses a liquid crystal display device 100 (See at least Figs. 1-2) wherein a backlighting device (Applicant's linear light-emitting source) comprises a plurality of LEDs 126 and a plurality of LED current control circuits 128. In addition, the parallel LED array 402 (See Fig. 4) includes a plurality of LEDs D2, D3, and Dn connected in parallel. The LEDs may be white LEDs or colored LEDs (See paragraph 29, lines 6-7, and paragraph 52, lines 1-3, respectively). Therefore, it would have been at least obvious to one of ordinary skill in the art to employ the backlighting device as a linear light-emitting source for achieving advantages such as the LEDs D2, D3, and Dn may each be separately current sourced to provide consistent LED brightness. This eliminates most brightness variations caused by LED forward voltage variations (See paragraph 53, lines 1-4 of Weindorf et al.). As a result, Sato et al. as modified by Holman et al. and Weindorf et al. discloses

- peripheral prisms having a brightness different from the center prisms are

disposed on both end portions of the linear light-emitting source.

Thereby, this eliminates most brightness variations caused by LED forward voltage variations (See paragraph 53, lines 1-4 of Weindorf et al.);

which renders obvious Applicant's light source unit having peripheral portions and a center portion therebetween, the light source unit comprising

a plurality of linearly-disposed point light-emitting sources disposed in the peripheral and center portions; and

a prism array which refracts light from the point light-emitting sources such that a brightness of light emitted from the center portion of the light source unit is increased; wherein the prism array comprises center prisms disposed in the center portion and peripheral prisms disposed in the peripheral portions, wherein the center prisms focus light passing therethrough to a greater degree than the peripheral prisms.

Allowable Subject Matter

Claims 1-3 and 5-12 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As to independent claim 1, a thorough search of relevant prior art of record did not disclose, alone or in combination, an image display system as claimed comprising:

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a liquid crystal display panel, a light source which emits light having a first polarization and light having a second polarization orthogonal to the first polarization onto the liquid crystal display panel,

a filter disposed between the liquid crystal display panel and the light source comprising:

optical means which refracts the light having the first polarization in a different direction than the light having the second polarization wherein the linear light-emitting source comprises a plurality of center prisms, disposed in the center portion which and a plurality of peripheral prisms, disposed in the peripheral portions wherein the center prisms focus light passing therethrough to a greater degree than the peripheral prisms.

The closest prior art is Sato et al. (WO 01/59508 A1, using US 6,864,862 B2 as the US equivalent document), in view of Weindorf et al. (US 2002/0140880 A1) and Holman et al. (US 6,871,982 B2), as applied above.

However, no prior art with proper motivation to combine was found to render obvious the particular combination of design specific limitations as claimed.

Dependent claims 2, 3, and 5-12 properly depend from claim 1 with allowable subject matter above.

Response to Arguments

Applicant's arguments with respect to claim 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **TIMOTHY RUDE** whose telephone number is (571)272-2301. The examiner can normally be reached on Increased Flex Time Program.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nelms C. David can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TIMOTHY RUDE/

Primary Examiner, Art Unit 2871